<center>**REMARKS**</center>

Claims 2-15, 20-34, 39-53 and 96-99 (and new claim 100 per Examiner's amendment) are pending in this application.

Interview Summary

Applicants thank Examiner Boswell for her participation in an interview on October 22, 2008. Applicants were represented by the undersigned and by Ms.Kunwar Singh.

During the interview, we discussed potential amendments to claim 96, such as the new claim 100. We agreed to submit a draft claim and did so on October 29, 2008, by e-mail. The claim that we submitted was substantially as presented as new claim 100 in this paper.

We understood from the interview that the reason to promptly submit a revised claim would be compact prosecution, that is, to get feedback from the examiner prosecuting the case. Unfortunately, the paper to which we are responding makes no comment on the draft amendment and offers no suggestions as to how to successfully conclude this prosecution. Given the increased emphasis that the Office has placed on effective interviewing, we hope the Examiner will renew her effort to use interviews to promote compact prosecution.

Rejection Under 35 U.S.C. § 101 of Claims 2-15, 20-34, 39-53, and 96-99

The Examiner rejects **claims 2-15, 20-34, 39-53, and 96-99** under 35 U.S.C. § 101.

The Examiner announces, without any case law support, the legal conclusion that positively claimed the data structure stored in a computer readable medium does not sufficiently tie the claimed method to a machine. (FOA at 4) None of the cases that the Examiner lists in the first paragraph of OA § 4 support the position drawn in the second paragraph of § 4, or are even relevant. The Office's Guidance, as counsel understands it, has not addressed whether a data structure stored in computer readable medium is sufficient to satisfy § 101. We would appreciate it if the Examiner would quote the Federal Circuit or Supreme Court to support the Examiner's new and novel interpretation of the law.

The Examiner's assertion that the claimed method could be performed without the use of a computer is mistaken. First, a human cannot manipulate data stored in a computer readable memory without using a machine. Second, a human cannot improve on existing computerized inventory control systems without using a machine. Third, no reasonable number of humans could possibly execute the method described on a per-item, per-store basis. It would not be economically feasible to attempt this without machines. Fourth, one of ordinary skill in the art, reading the claims in light of the specification and the prosecution history, would understand that the claimed method is carried out by a machine.

To avoid any room for argument, we disclaim any coverage of a method performed by a human without using a machine.

The controlling law includes *In re Lowry*, 32 F.3d 1479, 1581 (Fed. Cir. 1994), which is cited with approval in the examination guidelines incorporated into MPEP § 2106.01 at 2100-17 (Ver. 8, Rev. 6, Sept. 2007 and republished as part of Rev. 7, July 2008); *see also, In re Warmerdam*, 33 F.3d 1354, 1360-61, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994) (claim 5, data structure in machine memory[1] "clearly patentable subject matter", even though method by which data structure was made was not statutory subject matter). In those cases, a data structure in memory was enough to satisfy § 101, without nearly the extent of data structure manipulation that this claim includes. Examiner Boswell tacitly acknowledged the correctness of this position following our response submitted August 26, 2008 (see pp. 8-9) in another application for the same assignee, 09/766,539, which has now issued as US Pat. No. 7,523,048 (passed from Examiner Boswell to Examiner Jeanty for allowance).

We know from Judge Rader's interpretation of *Gottschalk v. Benson* that software running on a general purpose computer constitutes a "particular machine," as that phrase was used by the court in *In re Bilski*. Although his remarks are not in controlling Federal Circuit opinion, the Honorable Judge Randall Rader explained this on January 30, 2009 at the 2009 Santa Clara Computer & High Technology Law Journal Symposium, entitled "Shifting Strategies in Patent Law." He said, and we quote,

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[1] The text of claim 5, recited at 1358, was "5. A machine having a memory which contains data representing a bubble hierarchy generated by the method of any of Claims 1 through 4." The Federal Circuit declared that this claim was "clearly patentable subject matter". *Id.* at 1360 (following heading "2").

"what's a particular machine? It's a general purpose computer, but it came out of... the language came from the Benson (Gottschalk v. Benson) opinion at a time when we didn't know that a general purpose computer was a general purpose computer... digital computer is what Benson used." See, http://www.chtlj.org/symposiums/v25#video (approximately 10:45 into remarks of Judge Rader, Luncheon Keynote). We urge the Examiner to take Judge Rader's remarks into account when reconsidering this rejection.

Applicants respectfully submit that the rejection of claims 2-15, 20-34, 39-53, and 96-99 under § 101 should be withdrawn.

Preliminary Remarks and Request of Interview on July 16, 2009

Something has been lost during the course of this extended prosecution, as, nearly two years ago we began distinguishing between promotional events, such as price and advertising events, and non-promotional events, which include the exogenous events identified in dependent claim 97. This wording has been the subject of discussions with Examiner Boswell.

A person of ordinary skill who carefully reviews the record of this prosecution would understand that "non-promotion events" does not mean periods of time when no promotion is going on. In the last response to office action, on page 11, we made it clear that non-promotion or non-promotional events must be read to include the exogenous events identified in claim 97. The claim lists exogenous events to include "approaching holiday events, seasonal events, and special events in the city that increase customer traffic in the store." Id. The office action to which we are now replying makes the mistake of treating time periods when "promotions are at 0%" as non-promotion events. (OA at 3, top of page) This misunderstanding cannot qualify as not a broadest reasonable interpretation of the claims, whether in light of past interviews and negotiated claim language, written prosecution history, or the words of the dependent claims. Non-promotion events mean events (something going on) interpreted to include the exogenous events of claim 97.

On July 15, 2009, counsel will be attending the annual Business Methods Partnership meeting. We request an interview on the following day, July 16. The agenda will be negotiating an amendment that puts the case in condition for allowance. In the past, we have found it productive to go through the claim language in order to determine

whether the Examiner is reading the claims the same way that we are. Accordingly, appropriate preparation might identifying any terms in the claims that the Examiner and counsel are interpreting differently and reviewing the application and prosecution history to determine how one of ordinary skill in the art would interpret those claim terms. Preparation also should include reviewing this response and the history of amendments that the Examiner has suggested.

New Claim 100

The new claim 100 reflects our discussions with the Examiner and the draft claim submitted on October 29, 2008. New claim 100 is believed, based on those discussions, to distinguish over the art of record.

> A computer-implemented method of generating reports based on forecasting unit inventory and unit sales on a per-store basis for a multitude of goods at a plurality of stores, including:
>
> presenting multiple users with an interface for and collecting event data regarding pluralities of promotional events and non-promotional events that apply to individual stores and individual goods and that apply to hierarchically arranged groups of stores and groups of goods, whereby the hierarchical groups simplify entry and maintenance of event information for forecasting;
>
> updating a causal event calendar with the collected promotional and non-promotional event data, wherein the causal event calendar is a database that stores the event data for the multitude of goods at the plurality of stores in event data tuples, which include at least a good identifier, a store identifier, a start date, a stop date and an event type identifier;
>
> forecasting unit inventory and unit sales at a per-good, per-store level using the causal event calendar, by identifying one or more events applicable to a good-store pair and by using the event type identifiers to automatically select one or more demand modifiers that correspond to demand impacts caused by the applicable events; and
>
> generating, from results of the forecasting using the causal event calendar consistently across analytical tools, analytical reports for ordering, distributing, and bottom-up planning.

Rejection Under 35 U.S.C. § 103(a) of Claims 6-11, 20, 25-34, 39, 44-53, and 96-99

The Examiner rejects **claims 6-11, 20, 25-34, 39, 44-53, and 96-99** under 35 U.S.C. § 103(a) as unpatentable over Huang et al. (U.S. 6,151,582) in view of Silva-Risso (A Decision Support System for Planning Manufacturers' Sales Promotion Calendars).

Claim 96

    Claim 96 includes the limitations:

unifying treatment of <u>promotion and non-promotion events that impact demand</u> across the items and the stores and that impact particular items at particular stores by <u>tracking</u> a plurality of promotion events and <u>a plurality of non-promotion events</u> with a unified causal event calendar,

which said causal event calendar is a data structure stored in computer readable memory, wherein an event data tuple for an event in the causal event calendar includes at least a good identifier, a store identifier, a start date, a stop date and <u>an event type identifier</u>;

forecasting unit inventory and unit sales at a per-item, per-store level using the causal event calendar, by identifying one or more events applicable to an item-store pair and using the <u>event type identifiers for the applicable events</u> to automatically select a demand modifiers that correspond to demand impacts caused by the events; and

generating, from results of the forecasting using the causal event calendar consistently across analytical tools, analytical reports for ordering, distributing, and bottom-up planning prepared using at least some of the per-item, per-store level event detail from the causal event calendar.

These limitations are not found in Huang et al. in view of Silva-Risso.

    The Examiner has too briefly summarized the arguments made in our last response and, as a result, has not persuasively responded to them. The Examiner argues,

"that Silva-Risso was relied upon to teach store identifiers and causal calendars showing both promotion and nonpromotion events. Looking at page 290, figure 4, and page 294, figure 5, calendars are shown that includes both promotion and non-promotion events. The graph clearly shows by week when promotions are at 0% (not happening) and varying percentages from there."

(OA at 2-3) This should have been response to our position that

First, the article refers to "decisions [that] collectively make up what is known as a *sales promotion calendar*". (275, first paragraph) The name <u>sales promotion calendar</u> is italicized in the reference. Second, the only factor for which the model was calibrated was promotional price reductions. (286, paragraph following n. 7) While the model is capable of addressing two additional promotional event types for featuring the product and bringing in a custom display (*id.*), the manufacturer dissuaded the researchers from including these promotional event types for the canned tomato sauce. The entire teaching of Silva-Risso is to optimize price promotions.

The calendar in Silva-Risso figure 5 does not stray from optimizing price

> promotions. The promotional events shown on the calendar are a
> competitor's anticipated calendar of price promotions and the manufacturer's
> optimized price promotion calendar. There are no exogenous, non-
> promotional events (see claim 97) identified by type on the calendar in figure
> 5, only <u>manufacturers</u>' price promotions.

(Resp. Oct. 16, 2008 at 11). This is where we referenced claim 97, which lists specific

promotional events, which the retailer or manufacturer sponsors, and other non-

promotional events, outside the retailer's control. The Examiner's response to her short

summary of our position left the OA without any response to our actual position.

Moreover, the Examiner's position that time when promotions are at 0% reads on "non-

promotional events" is clearly erroneous. That is not how the claim limitation would be

interpreted, either looking at the words of claim 96 or reading claim 96 in light of claim

97. The underlined wording of claim 96 calls for tracking a plurality of non-promotion

events, which would make no sense if a "non-promotion event" were a nullity, were

when nothing was going on. The wording of claim 97, below, lists the kind of events that

are assigned an "event type identifier." The Examiner has not asserted and cannot

assert that the listed event types are found in Huang, in Silva-Risso or in the

combination of the two.

     Another argument that went unanswered was:

> It would be contrary to common sense to apply Silva-Risso to individual
> stores, because the model calibration is performed for a "large supermarket
> chain." Id. at 285-86. The calibration was, in fact, limited to canned tomato
> sauce (274, last line) price reductions (286, paragraph following n.7) by the
> manufacturer that the manufacturer expected for the large supermarket chain
> to pass through to consumers at an 80 percent rate. (286 n. 7) Common
> sense would never lead one to try and run this computationally intensive
> effort on a store-by-store basis. Common sense would not lead a
> manufacturer to negotiate with a retail account on a store-by-store basis.

(Resp. Oct. 16, 2008 at 10). It seems that the Examiner is trying in the OA at 3 to apply

something like a broadest reasonable claim language interpretation to the reference. A

reference is offered by the Examiner for what it teaches and is not interpreted like claim

language to find what it expressly excludes. When the Examiner says, at 3, "Examiner is

unclear as to where the reference states that it is solely related to supermarket chains",

the Examiner is reversing the burden of proof. We cited where the reference said that it

applied to a "large supermarket chain" and the Examiner ignored this. It is the

<u>Examiner's burden to find something in the reference that applies the method to</u> <u>individual stores among a plurality of stores</u> in a chain. That is what it means for the Examiner to have the burden of proof. Moreover, we have given very specific citations, to the line, and the Examiner has not responded to the specifics of our proof. It is not enough for the Examiner to say she is unable to locate the relevant passages of the reference <u>when the Examiner has the burden of proof.</u>

Finally, part of the OA requires further explanation. We do not understand the words,

> Further, examiner points out that claim 96 states that there are a plurality of stores that are then identified individually. Thus, the claim, in the broadest reasonable interpretation does not exclude the plurality of stores being in a retail chain if, indeed, the art did limit itself to only a retail chains.

(OA at 3) What does the Examiner mean?

Therefore, we respectfully submit that at least for the reasons stated above, claim 96 should be allowable over Huang et al. in view of Silva-Risso.

<u>Claim 97</u>

Claim 97 includes the limitations:

The method of claim 100, further including as <u>event types with corresponding</u> <u>event type identifiers</u>, events involving decisions by a retailer and exogenous factors, wherein

the decisions by the retailer include <u>price promotions, advertising promotions,</u> <u>promotions of substitute or complementary products, removal of substitute or</u> <u>complementary products from a selling assortment,</u> <u>and</u> <u>new product</u> <u>introduction</u>; and

the exogenous factors include approaching <u>holiday events, seasonal events,</u> <u>and</u> <u>special events in a city</u> that increase customer traffic at a store.

These limitations are not found in Huang et al. in view of Silva-Risso.

Reading the Examiner's position generously (OA at 2-3), the two event types that the Examiner has found in Silva-Risso are a manufacturer sponsored price promotion and times when no promotion is happening. These are the only types in the reference and they do not read on the claim language.

Separately, the Examiner argues Huang. (OA at 7-8). As we previously explained, Huang relies on either promotion class or promotion type attributes to adjust demand. (Resp. 8-6-2007, at 15) Huang's wording is promotion class or promotion

type; our claim wording is as quoted above. The Examiner specifically relies (OA 10-11-2007 at 17) on the passage from column 22:15-30 that explains Huang's "type of promotion" (line 20) and "class of promotion" (line 21). In that passage, Huang says,

> "The functional features associated with Sales Promotion Analysis are given below.
>
> Maintain Promotion Calendar and add new promotions:
>
> Time period of promotion.
>
> Type of promotion (defined by who initiates the promotion: firm, retailer, competitor), and Class of promotion (defined by the nature of the promotional activity.)"

Huang's promotion class and type attributes do not read on a "unifying … causal calendar" with "*event types [and] corresponding event type identifiers*" that represent "*promotions of substitute or complementary products, removal of substitute or complementary products from a selling assortment, and new product introduction*" or "*special events in a city that increase customer traffic at a store*". Huang's mention in columns 13 and 22 of "price promotions, advertising promotions, promotions of substitute or complementary products" is not part of a unifying causal calendar and, therefore, does not read on the claimed "event types with corresponding event type identifiers" as part of a unified causal calendar.

Therefore, none of Huang, Silva-Risso or their combination read on the positive limitations of claim 97, which should be allowable over Huang et al. in view of Silva-Risso.

Claim 98

Claim 98-99, which depend respectively from claims 100 and 97, include the limitations:

> The method of claim 100, wherein generating analytical reports consistently using the causal calendar data structure further includes reports to support:
>
> ordering items from suppliers,
>
> allocating item inventory for seasonal or fashion items received from suppliers among stores,
>
> distributing items from a distribution center to stores,
>
> bottom-up planning of sales, on-hand inventory and receipt of items into inventory,

top down planning that aggregates items at levels higher than individual items,

open to buy management reports that compare future inventory levels aggregated to a department level or higher with budgeted levels of inventory investment, and

markdown management that recommends timing and level of markdowns of seasonal or fashion items in order to sell out available inventory by a predetermined out date.

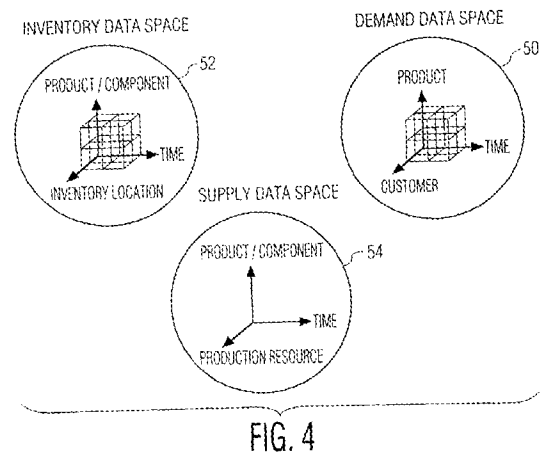These limitations are not found in Huang et al. in view of Silva-Risso.

The Examiner acknowledges (OA at 10), that Huang does not disclose an analytical report based on a causal calendar that "recommends timing and level of markdowns of seasonal or fashion items." The Examiner turns to Silva-Risso (OA at 10) citing pages 290, 294. Again, Silva-Risso disclosed only tomato soup. Those of ordinary skill in the art, after reading our application would not consider tomato soup to be a "seasonal or fashion item" as those terms are used in the claims. Moreover, the cited graphs on pp. 290, 294, refer to temporary price reductions offered by a manufacturer for staple goods, which would not be understood by one of ordinary skill in the art to be a "markdown of seasonal or fashion items in order to sell out available inventory by a predetermined date." Silva-Risso describes goods that the manufacturer wants the grocery store to sell over and over again and <u>not</u> goods to be sold out to exhaust available inventory.

To reiterate, for the record, our criticisms of the position in OA at 9-10, we revisit and restate our response of August 6, 2007. One of ordinary skill in the art, beginning with Huang, would not attempt to generate any of these reports, except, perhaps, ordering of items from the particular manufacturer and top-down planning. Even the potential exceptions, from the manufacturer's Huang perspective, would not match the call of the claims, which have an antecedent basis in store level analysis. One of ordinary skill would not expect, from the perspective of a single manufacturer, to generate reports to support *ordering items from **suppliers***, as multiple suppliers are competitors who do not see each others' orders. Similarly, Silva-Risso presents a single manufacturer's approach to selling through grocery chains. Top-down planning in Huang does not extend into selling locations and one of ordinary skill in the art would not venture to extend the manufacturer's system to that level. In contrast, Huang

emphasizes "market wide trends" across retailers, in col. 21, lines 36-37. Huang's limited interest in orders and top-down planning does not read on these claims, which, therefore, should be allowable.

The Examiner badly misreads Huang (OA at 8-9) when she asserts that reports based on store-level data for allocating, distributing, bottom-up planning from sales locations, open to buy management and markdown management are taught and enabled.

Allocation of item inventory among selling locations happens in retailing, but Huang does not teach or enable generating allocation reports for use by retailers. Post allocation to selling locations is not part of Huang's teaching. As discussed above, Huang has no interest in planning at the store or department-within-store level and no access to such granular data. The manufacturer assumes no control over or responsibility for distribution of goods after delivery to the customer's distribution center. Accordingly, Huang does not look to store-level simulation for data sources appropriate to agile manufacturing. All of the passages cited refer to supply into distribution

FIG. 4

centers (DCs) rather than out of DCs to selling locations. Reference to FIG. 4 (reproduced above) is typically unhelpful to the Examiner's position. As the Examiner relies only on Huang for allocation reports and Huang admittedly does nothing at the selling location level, these claims should be allowable over the art of record.

Distributing item inventory from DCs to selling locations also happens, but analytical support for distribution is not taught by Huang. We acknowledge that the word "store" appears in cols. 33 & 36, but not in a context that teaches distribution reports. It appears that a patent attorney modified Huang's disclosure to throw the word "store" in these columns, as an alternative to distribution centers (think Costco or other large package stores,) but did not discuss distribution from DC locations to stores or selling locations. Similarly, in col. 42, information available from Point of Sales systems about "retailing outlets" is mentioned, but the detailed data formats in which Huang teaches his approach (*see, e.g.,* Appendix A, cols. 112-131, especially POS data table cols. 122,

line 58 - 123, line 17) make it clear that the data received by the manufacturer is not granular enough to read on these claims. Taken as a whole, Huang addresses manufacturer deliveries to distribution centers and teaches away from using store-level data. This can be seen in more than 80 references to the customer "DC" throughout Huang's disclosure. Therefore, these claims should be allowable over the art of record.

Bottom-up planning means something different to a manufacturer and to Huang in particular than it means to a retailing manager. This is why Huang teaches away from using store-level data. Huang's bottom-up planning does not reach into selling locations as claimed in the antecedent basis to this dependent claim. Therefore, these claims should be allowable over the art of record.

Open to buy management reports for retailers involve total inventory budgets across competing vendors and manufacturers. This is not data that one of ordinary skill would expect to interest Huang to access. Mentioning "budget concerns" (OA at 6) for sale of products from one particular manufacturer does not read on open to buy management reports, which span competing vendors and manufacturers. Retailers cannot be expected to give detailed budget and inventory information for manufacturer B's products to manufacturer A, which would be necessary to have manufacturer A generate an open to buy management report. Therefore, these claims should be allowable over the art of record.

For at least these reasons, we respectfully urge that claim 98-99 should be allowable over Huang et al. in view of Silva-Risso.

Claims 2-15, 20-34, 39-53 and 99

Claims 2-15, 20-34, 39-53 and 99 depend from the amended claim 96 should be allowable over Huang et al. in view of Silva-Risso because they depend from an allowable claim and for the reasons stated in prior office actions, which are hereby incorporated by reference.

CONCLUSION

Applicants respectfully submit that the pending claims are now in condition for allowance and thereby solicit acceptance of the claims as now stated.

Applicants would welcome an interview, if the Examiner is so inclined. The undersigned can ordinarily be reached at his office at (650) 712-0340 from 8:30 a.m. to

5:30 p.m. PST, Monday through Friday, and can be reached at his cell phone at (415) 902-6112 most other times.

Fee Authorization. The Commissioner is hereby authorized to charge underpayment of any additional fees or credit any overpayment associated with this communication to Deposit Account No. 50-0869 (BLFR 1003-1).

Respectfully submitted,

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